exposing the at least one sample population to a candidate optical contrast enhancing agent;

acquiring test data relating to one or more optical properties of the sample population subsequent to exposure to the candidate optical contrast enhancing agent;

comparing the test data acquired to comparison data relating to the one or more optical properties of the sample population, whereby changes in the one or more optical properties reflected in the test data compared to the comparison data represent the optical contrast enhancing activity of said agent in said sample population; and

based on the comparison data, determining if the optical contrast enhancing agent is useful for distinguishing malignant, pathological or dysfunctional cells or tissue.

Please add the following new claims:

18. The method according to claim 17, wherein at least one of the sample population comprise malignant or pathological cells and the usefulness of the agent in distinguishing the malignant or pathological cells is determined.

19. The method according to claim 17, wherein the biological material is an organ culture system.